

XXXIII.—*Descriptions of new Species of Lizards in the Collection of the British Museum.* By A. W. E. O'SHAUGHNESSY, Assistant in the Natural History Departments.

THE present paper contains descriptions of four new species of Cercosauridæ, one of them being the type, apparently, of a new genus. I have also taken this opportunity to publish descriptions of some new species of lizards belonging to the genera *Gongylus*, *Mococa*, and *Leiocephalus*.

Neusticurus eupleopus, Cope.

Neusticurus eupleopus, Cope, Journ. Ac. Nat. Sc. Philadelphia (n. s.) viii. 1876, p. 161.

In the course of recent examinations of lizards in the British-Museum collection I have been able to recognize and separate this species from *N. (Custa) bicarinatus*, L., having previously labelled it as a new species before seeing Prof. Cope's description. M. F. Bocourt informs me, in reply to a communication which I addressed to him on the subject, that he has found two very small specimens in the Paris Museum, collected by MM. Castelnau and Deville (Cat. Méthod. 1851, p. 112), exhibiting all the characters by which this species is distinguished from the larger one. In the British-Museum collection it is represented by three full-grown examples and one young, while of the *N. bicarinatus* we possess two adults and one young individual. From this series I am enabled to state that the internasal plate is not always entire in *N. eupleopus*, two of the specimens showing it cleft longitudinally as in *N. bicarinatus*. The other points of difference, however, are very well marked. The carinæ of the dorsal scales are much stronger and more prominent; the scales on the nape are granular, with rows of convex ones, much as in *Lepidophyma*; moreover the ventral plates are quadrangular and in six longitudinal series, whereas in *N. bicarinatus* they are always rounded and in eight or ten series. I may further add that in *N. bicarinatus* there is a small quadrangular pre-frontal plate wedged in between the internasal and the two large fronto-nasals; in *N. eupleopus* this extra plate is absent, even when the internasal is bisected.

EMPHRASSOTIS, gen. nov. (Cercosaurid.).

Head broad, somewhat flattened above; snout short, rounded. Ear indistinct. Nostril in a single large nasal plate; no frenal; no supranasals; no fronto-parietals; no fronto-nasals.

Scales of back narrow, elongate, smooth, in transverse rings; of belly smooth, square, in longitudinal series. A slight fold along the side of the body, but without smaller scales.

Emphrassotis simoterus, sp. n.

Head broad, flattened above; snout short, rounded. Ear indistinct. Nostril in a single large nasal plate; no separate frenal plate, there being an oblique superficial groove, not amounting to a division, in the middle of the nasal plate above the small præocular. A large anterior supraocular. Internasal longer than broad; no fronto-nasals or fronto-parietals; frontal broad, scarcely longer than internasal, not touching the point of the narrow wedge-shaped interparietal, from which it is separated by the slight anterior junction of the two very large parietals, which are followed by two rather large, transverse, postparietals; a series of small occipitals behind the inter- and postparietals. Only two pairs of postmental shields behind the large single submental.

A slight fold along each side, but without smaller scales.

Scales of the back elongate, narrow, quadrangular, in transverse series, not keeled; those of the belly square, in ten longitudinal series. Præanal scutes 2, 5.

In other respects this lizard resembles *Proctoporus pachyurus*, Tsch., and *Riama unicolor*, Gray. From the first it differs in the absence of a frenal plate, agreeing in that character, and in having only two pairs of postmentals in contact after the submental, with Gray's species. The absence of fronto-parietals, however, separates it from both.

Above light brown, thickly variegated with darker; entire ventral surface bluish.

One specimen, $4\frac{1}{2}$ inches in length, from Intac, Ecuador, collected by Mr. Buckley, is in the collection of the British Museum.

This lizard seems to constitute a link between the Cercosauridæ and *Gerrhonotus*.

	millim.
Distance of snout from eye	5
" " fore limb.....	27
" " vent.....	70
Length of fore limb	13
" third front toe	4
" hind limb	18
" fourth hind toe.....	5

Eupleopus (Proctoporus) Fraseri, sp. n.

Head somewhat elongate. Ear well developed. Nostril in

the nasal shield, which is followed by a quadrangular frenal, placed obliquely over a triangular præocular. Internasal broad, longer than frontal; no fronto-nasals; a pair of fronto-parietals, each as long as the frontal; two large parietals, one interparietal, and three small occipitals. Three pairs of postmentals in contact behind the single submental; large scutes in two series before the collar. Dorsal scales in 35 transverse rows from occiput to base of tail, quadrangular, elongate, smooth. Sides with much smaller scales, almost granular on the sides of the neck and behind the axilla. Belly with nearly square quadrangular plates, in 10 longitudinal series. Præanal scutes large, 2, 5, the central one in the hinder row very narrow. The fore limb reaches forward to the eye; the posterior, half the length of the side.

Bluish above, with black dots placed irregularly; a black lateral stripe from the eye along the side of the body. Lower surface paler bluish; round black dots numerous and distinct on inferior surface of the limbs.

The specimen in the British Museum is from Guayaquil, and was collected by Mr. Fraser, together with a number of other Cercosauridæ which have been described from time to time.

This species differs from *E. maculatus*, Tschudi, in the absence of fronto-nasals. It appears to resemble considerably *Proctoporus pachyurus*, Tschudi, but has not the small rounded convex scales on the neck of that species, in which also the number of dorsal rows of scales is 54.

	millim.
Distance of snout from eye	5
" " ear-opening	12
" " fore limb	23
" " vent	53
Length of fore limb	15
" fourth front toe	5
" hind limb	20
" fourth hind toe	8

Eupleopus oculatus, sp. n.

Head rather long and narrow. Ear distinct. Internasal and frontal plates equal, the suture between them straight; no fronto-nasals; a pair of fronto-parietals, nearly as long as the frontal, in contact throughout their length; interparietal large, broad; parietals large, pentagonal; two postparietals. Nostril in middle of a large nasal plate, which is followed by a quadrangular frenal. An elongate plate at the angle of the mouth, and five supralabials; temporals large, polygonal. Submental elongate, followed by only two pairs of contiguous postmentals; a third pair are widely separated by a group of

wedge-shaped and pentagonal plates, which occupy the rest of the space as far as the first gular row of scales, of which there are three small and three large before the collar.

Dorsal scales narrow, elongate, each scale elevated into a ridge in the middle, in 36 transverse series between the occiput and the root of the tail; scales of the sides much smaller, round, convex or granular on side of neck and axillary region; of belly in 10 longitudinal series, the middle ones square, the outer ones narrower. Tail with scales like the back and the belly. Præanal scutes 2, 4.

The fore limb reaches to the middle of the eye, the hind limb two thirds the length of the side.

Brown above; a longitudinal stripe of lighter brown edged with black on each side of the back from the occiput to the tail. Ten or eleven conspicuous ocelli, white in the centre, and surrounded by a black ring, along the side of the body; beneath each one of these a smaller white spot is visible. All the ventral scutes and those of the under surface of the limbs black in the middle, white on the edges, the black forming longitudinal stripes.

One specimen, collected by Mr. Buckley at Intac, Ecuador.

	millim.
Distance of snout from eye	5
" " ear-opening	14
" " fore limb.....	27
" " vent.....	63
Length of fore limb	20
" third front toe	4
" fourth front toe	5
" hind limb	27
" fourth hind toe.....	9

The lizard here described evidently resembles closely the description given of *E. (Oreosaurus) luctuosus* by Dr. Peters in Abhandl. Ak. Berl. 1862, p. 205, with which it is perhaps identical. Dr. Peters states that there are 43 transverse series of scales between the occiput and the root of the tail, and has not given a figure of the lizard. I am inclined to think, however, that I have only redescribed that species.

Cercosaura (Pantodactylus) vertebralis, sp. n.

A single broad internasal plate, separated from the frontal by a pair of fronto-nasals; frontal very short, scarcely longer than the internasal, and only half the length of the supraorbital region; two fronto-parietals as long as the frontal, and contiguous throughout the whole of their length; an interparietal and two parietal plates, followed by three occipitals; two series of large

temporals. Nostrils anteriorly in a large nasal plate, behind which are two pentagonal frenals. Lower eyelid with a transparent disk. Supralabials 6; infralabials 5; submental broad, followed by two pairs of large contiguous postmentals; a double series of very broad plates occupies the centre of the throat to the collar, the sides being granular. Scales of the back very narrow, elongate, keeled, with triangular points in front and behind, closely fitting, in 14 longitudinal and 31 transverse series from occiput to root of tail; scales similar to those of the dorsal series descend almost to the ventral plates in the middle of the body, the rest of the lateral region in front and behind being granular like the sides of the neck. Ventral shields in 6 longitudinal series, those of the 4 inner being very broad, of the two external smaller, in 22 transverse rows. Præanal scutes 2, 2, like those of the belly—a small triangular one, with the apex wedged in between the two preceding scutes, completing the præanal border. Tail with scales continued in series like those of the back and belly.

A broad bluish-white or cerulean stripe extends from the tip of the snout to the extremity of the tail, with a narrow black border on each side along its whole length. Entire upper surface on either side of the stripe and sides of the body olive-brown, taking in the supraorbital and temporal regions of the head, which are sharply defined against the central stripe. A narrow white stripe along the supralabials to the armpit. A series of small white ocelli surrounded by black rings from the ear along the whole side of the body and tail; two lower series of smaller similar ocelli between the fore and hind limbs. A conspicuous white ocellus at the junction of the forearm and the chest, another in the middle of the forearm, and a third on the elbow; some ocelli also on the hind limb.

Lower surface bluish, sprinkled with blackish.

This species, remarkable for its coloration, is most closely allied to *Cercosaura (Pantodactylus) argulus*, Peters, *l.c.* p. 184. Amongst other differences the latter has only a single frenal, and the internasal is divided into two plates.

The type specimen in the British Museum is from Intac, Ecuador.

	millim.
Distance of snout from eye	3
" " ear-opening	$8\frac{1}{2}$
" " fore limb	15
" " vent	33
Length of fore limb	12
" third front toe	3
" fourth front toe	$4\frac{1}{2}$
" hind limb	16
" fourth hind toe	6

Mocoa tetradactyla, sp. n.

Head broad; snout obtuse, rounded. Internasal plate broad, its posterior point touching the short pentagonal frontal; two broad transverse fronto-nasals nearly contiguous; fronto-parietal plate very large; its greatest breadth nearly double that of the frontal, almost triangular, but furnished with a posterior projection which reduces the interparietal to the merest rudiment; two oblique transverse parietals, each followed by two broad posterior plates. Four supraorbital plates. Nostril in the hinder and lateral portion of the nasal plate, the anterior angle of which is separated from that of the opposite side by the internasal; two frenals and three præoculars, one superior and two inferior. Seven supralabials; six infra-labials. Transparent disk of lower eyelid very large. Ear-opening moderate. Scales smooth, equal on the sides and belly, in 32 longitudinal series, the middle ventral series between the chin and the vent consisting of 54 scales.

Anterior limb, when stretched forward, reaching to front angle of eye; with four toes, the first shorter than the fourth, the second shorter than the third, which is the longest: hind limb reaching forward three fourths the length of the side, with five toes.

Above olive-brown; speckled with black on the head. Five longitudinal black lines on the back between the series of scales, and separated from the sides of the body by a broad unbroken stripe of the ground-colour; a bright yellowish-brown stripe extends from above the ear-opening along the side to the tail, and another similar stripe between the fore and hind limbs. Lower surface bluish.

	millim.
Distance of snout from eye	5½
" " ear-opening	12½
" " fore limb	20
" " vent	55
Length of fore limb	15½
" third front toe	4
" hind limb.....	20

The above description is drawn from a single specimen obtained from Mr. Krefft, no locality being affixed to it. As I can see no good distinction between Dr. Gray's genus *Carlia* and *Heteropus*, the typical specimen of *Carlia melanopogon* having the scales as distinctly keeled as those of *Heteropus fuscus*, I prefer leaving the present species, in which the scales are smooth, in *Mocoa*.

Mocoa mustelina, O'Shaughn.

Lygosoma lacrymans, Peters (Annali del Mus. civ. di Genova,

xiii. 1878, p. 348), is identical with the above species, described by me in Ann. Nat. Hist. (4) 1874, xiii. p. 299.

Dr. Peters has recently confirmed, in the Annali del Mus. civ. di Genova, xiii. 1878, p. 347, my statement of the identity of *Euprepes novaræ*, Steind., with *Lygosoma (Mocoa) noctua*, Less. (Ann. & Mag. Nat. Hist. (4) xii. 1873, p. 44). He further suggests as probable that *Mocoa cuprea*, Gray, should be referred to the same species. I agree with Dr. Peters that it would have been impossible to form a correct idea of this lizard from the description given of it by Dr. Gray. I am, however, able to answer his query respecting it. The specimen designated as *Mocoa cuprea* is not in a good state of preservation; it is very different from *Mocoa noctua*, being perhaps not a *Mocoa* at all.

Gongylus gastrostictus, sp. n.

All the head-shields exactly as in *G. ocellatus*, with the exception of one additional supraorbital. Lower eyelid scaly, not transparent; ear large. Scales everywhere rounded, smooth, smaller on the sides; in 32 longitudinal series; 70 transverse series between the mentals and the vent. Limbs short, the fore limb, when laid forward, reaching to the anterior margin of the ear; a postaxillary groove not well developed; toes as in *G. ocellatus*.

Uniform brown above. Sides densely variegated with blackish, passing into series of dots on all the scales of the ventral surface, the ground-colour of which is whitish; chin blotched; infralabials bordered with blackish.

	millim.
Distance of snout from eye	5
" " ear-opening	11
" " fore limb	23
" " vent	80
Length of fore limb	13½
" third front toe	3
" hind limb	20
" fourth hind toe	7½

One specimen from Madagascar in the British Museum.

This adds another to the many representatives of the genus *Gongylus* in Madagascar hitherto made known by M. Grandidier, and more recently by Dr. Günther.

Leiocephalus (Craniopeltis) variegatus, sp. n.

Head broad, flattened above; its width equal to its length from the postoccipital to the tip of the snout. Scales on the muzzle swollen, irregular. Two interorbital series of poly-

gonal scales, which, contiguous between the supraorbital disks, diverge anteriorly, forming a group of very large scales, two on each side, on the top of the muzzle. Occipital plate large, irregularly oblong, followed by a small postoccipital; two large polygonal plates between the former and the supraorbital disk on each side. Supraorbitals composed of a central series of six large plates, with series of hexagonal small scales on each side. Supralabials 7; one exceedingly long infraocular; loreals small, in several series. Three gular folds; sides of the neck with numerous folds between the ear and the fore limb, and with bunches of projecting scales on the anterior border of the ear and on each side of the neck. A central crest of curved scales from the occiput along the middle of the back and tail. Scales of the back small, keeled; of the tail larger, keeled; of the belly intermediate in size and smooth. Tail broad, flattened at its base. Upper surface variegated with somewhat ill-defined dark brown crescentic cross bands, leaving narrow spaces of light ground-colour, and covered with irregular yellowish-white dots. Sides bluish. Lower surface yellowish; gular region clouded with darker.

	millim.
Distance of snout from eye	11
" " ear-opening	26
" " fore limb	47
" " vent	116
Breadth of head	24
Length of fore limb	52
" fourth front toe.....	15
" hind limb	69
" fourth hind toe.....	18

This species is apparently very similar to *Aneuporus occipitalis*, Boc., referred by Cope to *Craniopeltis*, Peters. It clearly belongs to that section of the genus *Leiocephalus* as constituted by Gray which has the large occipital plate characteristic of *L. Grayii*, Bell, *L. microlepis*, Gray (a species which we are unable to identify), and the species described by Peters under the subgeneric name *Craniopeltis*, as a subdivision of *Tropidurus*, Wied.

From all the species now represented in the British Museum it differs by characters which the above description will render apparent; and the irregularly shaped occipital, rather longer than broad, is a much smaller plate than that of *Aneuporus* figured by M. Bocourt, in Miss. Scient. au Mexique, pl. xviii. fig. 1.

Two specimens, the longest of which is $11\frac{1}{2}$ inches in length, were collected by Mr. E. White near Cordova.

Leiocephalus aculeatus, sp. n.

Two lateral carinæ along the upper edge of the sides as well as the median dorsal one. Supraorbitals very broad, as in *L. iridescens*, Gthr.

Head as high as broad. Nostril posteriorly in an elongate nasal shield. Scales on the top of the muzzle numerous, polygonal, becoming larger towards the frontal region, where they pass into the two series of large interorbital plates, which are closely in contact. Three occipital plates—two rather large anterior, and one small posterior; two parietals on each side, the posterior one being very large. Orbital canthus sharp. A single series of very broad supraorbitals bordered with some small scales on each side. Only one elongate scale on the canthus between the upper angle of the orbit and the nostril, there being two such scales in *L. iridescens*. Upper labials four, narrow, elongate; a row of eight small scales above them; two rows of frenals, with an elongate infraocular scale. Ear-opening about half as large as the eye. The scales are everywhere keeled, sharp and dagger-like, with projecting points. A median dorsal crest of erect triangular scales extending on the tail; a weaker lateral one on each side of the back. Tail long, compressed, nearly thrice the length of the body.

Bronzed green, brownish on the sides, with vertical streaks. A white stripe from the ear to the fore limb, and another superiorly from the ear as far as the shoulder; another white stripe descending from the lateral carina to the fore limb.

	millim.
Distance of snout from eye	10
" " ear	23
" " fore limb	45
" " vent	100
Length of fore limb	50
" third and fourth front toe	16
" hind limb	85
" fourth hind toe	25

Five specimens of the above described species were collected by Mr. Roff; they are from Moyobamba, Peru.

XXXIV.—*On the Homologies of the Cephalopoda.* By J. F. BLAKE, M.A., Lecturer on Comparative Anatomy at Charing-Cross Hospital.

THERE are two points of interest in the relations of the Cephalopoda which cannot yet be said to be settled. The first